

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	DA99-1893
Amendment of Section 73.622(b))	MM Docket No. 99-289
Table of Allotments)	RM-9668
Digital Television Broadcast Stations)	
(Champaign, Illinois))	

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COMMENTS OF ILLINOIS SIGNAL COMMUNICATIONS, INC.

Illinois Signal Communications, Inc., pursuant to Sections 1.415 and 1.420 of the Commission's Rules, hereby files comments on the Notice of Proposed Rule Making in the above-captioned proceeding.^{1/} The Commission should deny Midwest Television, Inc.'s ("Midwest") request to substitute DTV Channel 5 for station WCIA(TV)'s assigned DTV Channel 48 in Champaign, Illinois. The substitution is against the public interest because Midwest's operation on Channel 5 would cause interference to Illinois Signal Communications, Inc. CMRS services operating in the area.

BACKGROUND

Illinois Signal Communications, Inc. is a CMRS Provider, providing paging and voicemail services. Illinois Signal Communications, Inc. provides these services in the states of Illinois, Missouri and parts of Iowa. Illinois Signal Communications, Inc.'s primary distribution frequency for these paging services is 157.740MHz. However, Illinois Signal Communications, Inc. employs several 72 MHz and 75MHz frequencies for distribution of paging data as well. Illinois Signal Communications, Inc. holds the

^{1/} *Amendment of Section 73.622(b), Table of Allotments, Digital Television Broadcast Stations (Champaign, Illinois), MM Docket No. 99-289, RM-9668, Notice of Proposed Rule Making, DA 99-1893 (rel. September 20, 1999).*

following FCC call signs: WPMC658, WPJY821, WPJS799, WPGY549, WPEC710, WPLZ224, WPDP222. Illinois Signal Communications, Inc. and it's network affiliates provide paging service to in excess of 50,000 subscribers throughout it's coverage region. These subscribers include but are not limited to hospitals, hospital emergency rooms, physicians, fire departments, police and sheriff departments, ambulance districts, and an assortment of disaster relief agencies as well as an entire cross -section of the local business communities.

The Entities that Illinois Signal Communications, Inc. provides these services to will consider it of dire importance that these services be provided uninterrupted and unimpeded.

ARGUMENT

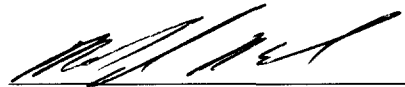
It is Illinois Signal Communications, Inc.'s belief that the use of Channel 5 for DTV will cause unpreventable and unrepairable interference to our operations in the Champaign, Illinois area. Specifically, our engineering study shows (see attached Engineering Study by Raymond C. Trott P.E.) that the station on call sign WPJS799, line item B, will receive sufficient interference on it's in-bound receive frequency of 75.82MHz from the Channel 5 DTV station as to cause all Illinois Signal Communications, Inc. paging activities in the Champaign area and for 25 miles in every direction to cease.

This interference will not only impact Illinois Signal Communications, Inc.'s ability to provide services to the afore mentioned entities, but will interfere with these entities ability to conduct their often life critical operations.

CONCLUSION

For the reasons stated above, the Commission should deny Midwest's proposal to substitute DTV Channel 5 for DTV Channel 48 in Champaign, Illinois.

Respectfully submitted,
Illinois Signal Communications, Inc.



Michael J. McCabe
Vice President of Engineering
Illinois Signal Communications, Inc.
926 Broadway, Quincy, Illinois 62301

Dated: November 4, 1999

CERTIFICATE OF SERVICE

I, Michael J. McCabe, hereby certify that on this 4th day of November, 1999, a copy of the forgoing Illinois Signal Communications, Inc. comments in response to Midwest Television's request to substitute Channel 5 for station WCIA (TV)'s assigned DTV Channel 48 in Champaign, Illinois, was sent by first class U.S. Mail to the following:

A handwritten signature in black ink, appearing to read 'Michael J. McCabe', is written over a horizontal line.

Michael J. McCabe

Dated: November 4th, 1999

Jonathan D. Blake
Mary Newcomer Williams
Covington & Burling
1201 Pennsylvania Ave NW
Post Office Box 7566
Washington D.C. 20044-7566

**DTV 5 INTERFERENCE ANALYSIS
TO WPEC710 75.82 MHz RECEIVER****Analysis:**

The following is the analysis of interference potential from a proposed installation of a Digital Television (DTV) transmitter by Midwest Television, Inc. ("MTI") at Champaign, IL. The study addresses potential interference from the DTV 5 station to an existing land mobile receiver on 75.82 MHz in the Champaign area (WPEC710). The 75.82 MHz receiver is part of a control network licensed to Illinois Signal Communications, Inc., (ISCI) Quincy, IL.

The station parameters are:

DTV 5

Coordinates (NAD 27):	40° 06' 21" N Lat 88° 27' 00" W Lon
ERP @ 76-82 MHz:	+66.5 dBm 4.5 KW
Mask Loss (per §73.623(h)(1)):	-47.0 dB
ERP @ 75.82 MHz:	+19.5 dBm 0.09 W
Radiation Center:	281 m AGL, 501.1 m AMSL
Antenna:	Omnidirectional

Bloomington, 75.82 MHz Transmitter (WPEC710)

Coordinates (NAD27):	40° 25' 05" N Lat 88° 54' 21" W Lon
ERP:	+53.0 dBm 200 W
Radiation Center	46 m AGL, 317 m AMSL
Antenna	Omnidirectional

WPEC710, 75.82 MHz Receiver Site

Coordinates (NAD 27)	40° 10' 10" N Lat 88° 17' 56" W Lon
Radiation Center:	30 m AGL, 280 m AMSL
Antenna:	DB 230, directed at 298.3° (see Exhibit TCG-4)

The signal levels from both the DTV5 and Bloomington transmitters were calculated utilizing the field strength charts of FCC Report R-6602. The signal level from the DTV5 transmitter was derived from the F(50,10) curves and was determined to be 32.5 dBu at the receiving antenna. Adjusting for antenna gain (1.3 dBd), the signal at the output of the antenna was 33.8 dBu. The signal level from the Bloomington transmitter was derived from the F(50,50) curves and was determined to be 25.8 dBu. Adjusting for antenna gain (7.0 dBd), the signal at the output of the receiver antenna was 32.8 dBu. This places the undesired signal 1.0 dB stronger than the desired signal at the input to the 75.82 MHz

receiver, thus, interference will occur to the ISCI receiver from the proposed DTV5 transmitter and corrupt the signals to the outlying paging transmitters leaving transmitted pages unreliable.

For the study, the calculations utilized antenna radiation centers above average terrain (HAAT) values derived from the National Geophysical Data Center 3 Second Point Elevation Data.

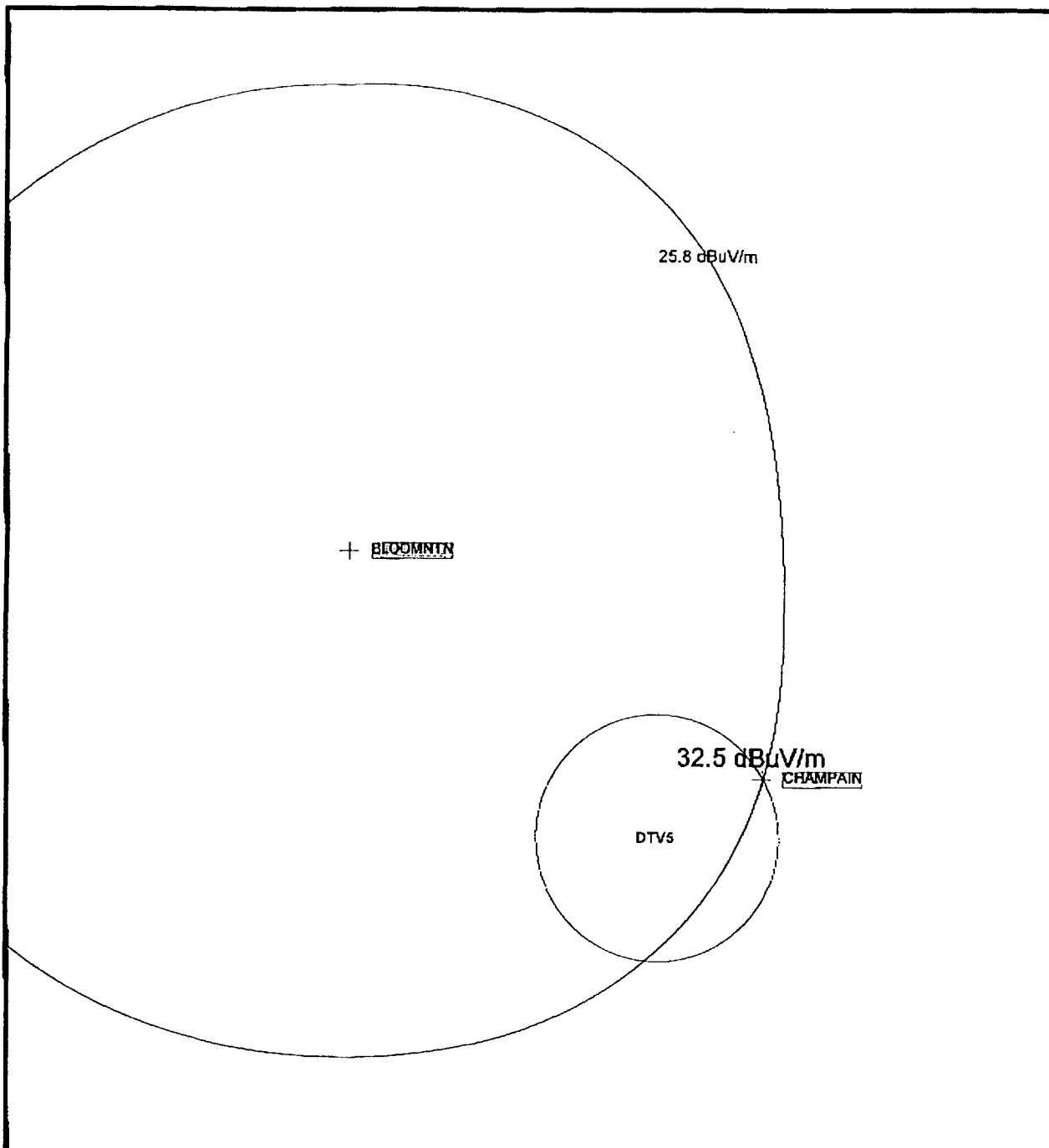
List of Engineering Exhibits

Exhibit:	TCG-1:	Illustration of Signal Levels at Affected Receiver
	TCG-2:	DTV5 Contour Calculation
	TCG-3:	Bloomington Contour Calculation
	TCG-4:	DB 230 Antenna Radiation Pattern



Raymond C. Trott, P.E.

November 4, 1999



SIGNAL™: DTV5CHA3.map

Prop. model: FCC-FCC
 Time: 50.0% Loc.: 50.0%
 Prediction Confidence Margin: 0.0dB
 Climate: Continental Temperate
 Groundcover: none
 Atmospheric Abs.: none
 K Factor: 1.333
 RX Antenna - Type: OMNI
 Height: 1.5 m AGL Gain: 0.00 dBd
 Field strength at remote

■ = 25.8 dBuV/m
 Min. receiver threshold level: -200.0 dBmW

Site	Ant. Elev. AMSL (m)	ERPd (dBW)	Ant. Type/Orient.	Coordinates
BLOOMNTN	317.0	23.00	Omni-V	N40°25'05.00"
group: 1	76.0000	MHz		W88°54'21.00"



INTERFERENCE STUDY

DTV5 vs CHAMPAIGN 75.82 MHz

11-04-99

EXH TCG-1

Exhibit TCG-2
DTV 5 Contour Calculation

DISTANCES TO CONTOURS (Kilometers):

Antenna COR elevation (AMSL): 501 mtrs Average HAAT: 284
mtrs

Frequency: 76.0000 MHz

Coordinates: N 40 6 23.00 W 88 26 59.00

F(50,10) Curves

AZ (degs)	HAAT (m)	ERPd (w)	CONTOUR LEVELS (dBu): 32.5
0.0	278	0.089	14.9
45.0	274	0.089	14.8
90.0	280	0.089	14.9
135.0	287	0.089	15.1
180.0	291	0.089	15.2
225.0	290	0.089	15.2
270.0	291	0.089	15.2
315.0	285	0.089	15.1

Exhibit TCG-3
Bloomington Contour Calculation

DISTANCES TO CONTOURS (Kilometers):

Antenna COR elevation (AMSL): 317 mtrs Average HAAT: 73
mtrs

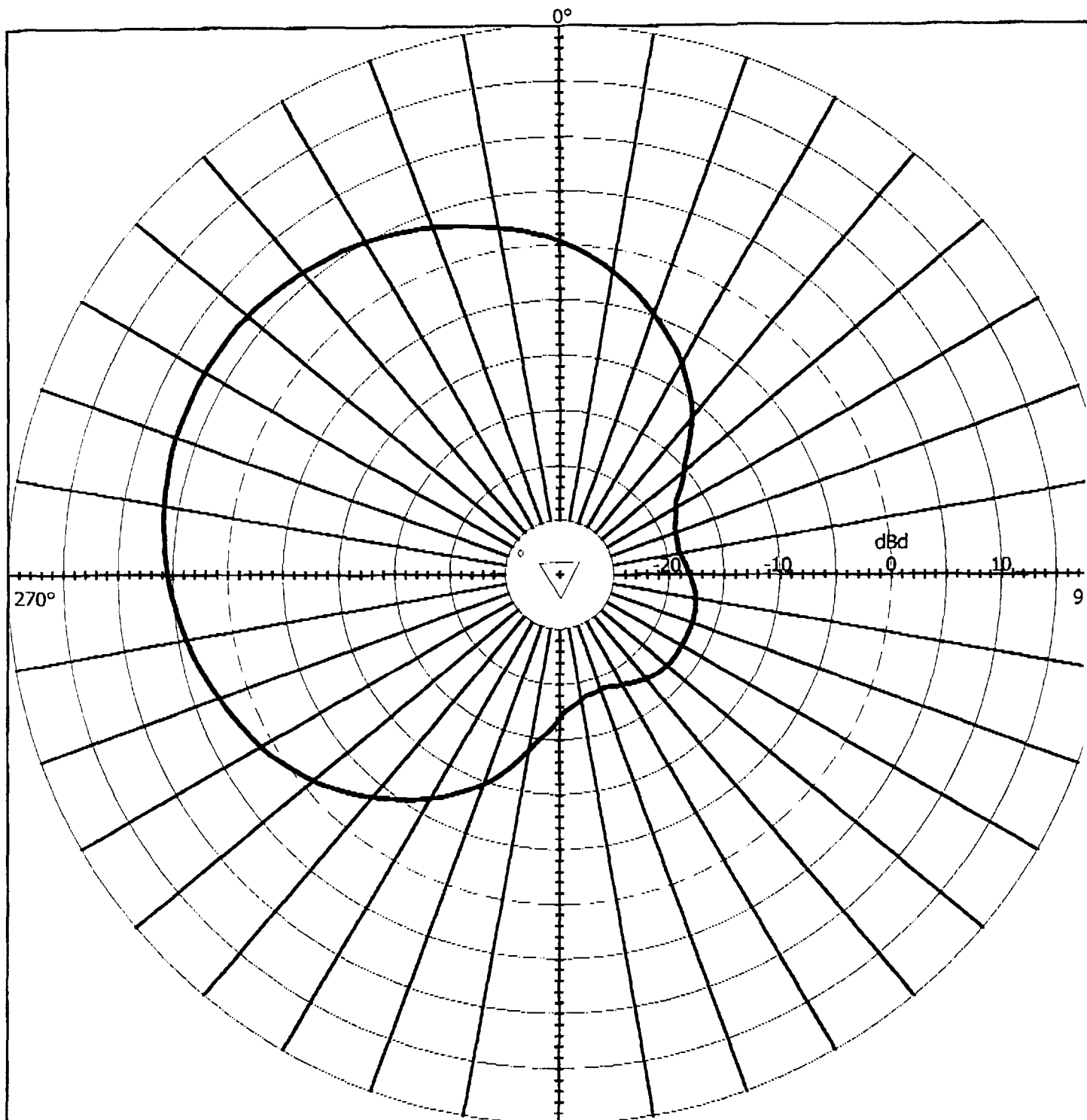
Frequency: 76.0000 MHz

Coordinates: N 40 25 5.00 W 88 54 21.00

F(50,50) Curves

AZ (degs)	HAAT (m)	ERPd (W)	CONTOUR LEVELS (dBu): 25.8
0.0	63	200	57.4
45.0	65	200	58.0
90.0	51	200	54.1
135.0	79	200	61.5
180.0	80	200	61.7
225.0	89	200	63.9
270.0	87	200	63.4
315.0	71	200	59.6

Exhibit TCG-4



TROTT
COMMUNICATIONS GROUP, INC.

AZIMUTH RADIATION PATTERN

DB 230
Oriented N 298° E, as shown